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ABSTRACT

An instructor's manual and student activity guide on practical nursing are provided in this set of prevocational education materials which focuses on the vocational area of health occupations. (This set of materials is one of ninety-two prevocational education sets arranged around a cluster of seven vocational offerings: agriculture, home economics, distributive education, health occupations, world of work, trade and industry, and office occupations.) The instructor's guide is organized into the following elements: title of activity, duration of activity (three to seven periods), activity goals, eight instructional objectives, related vocational clusters, and activity implementation (description, materials needed, safety considerations, teacher preparation prior to class, during the class, follow-up activities, answer keys to student check point activities, and check point sheets and a handout to be duplicated). The student activity guide provides step-by-step instructions (narrative and illustrations) for completing each instructional objective (e.g., identify parts of a sphygmomanometer and stethoscope, take another student's blood pressure). At the end of each set of instructions is a student check point (evaluation activity). Occupational descriptions for a licensed practical nurse and a practical nurse conclude the document. (JH)

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ED169334

HEALTH OCCUPATIONS – PRACTICAL NURSE

Kit No. 45

INSTRUCTOR'S MANUAL

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1978

CE 020 519

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TITLE OF ACTIVITY

Kit No. 45, Practical Nurse

DURATION

Main Activity – 2 to 3 periods
Follow-up Activity – 1 to 4 periods

GOALS

The student will know the names of the different parts of a blood pressure cuff.

The student will know the names of the different parts of a stethoscope.

The student will learn how to use a blood pressure cuff.

The student will learn how to take and record another student's blood pressure.

The student will learn how to clean a stethoscope after use.

INSTRUCTIONAL OBJECTIVES

The student will identify the parts of a sphygmomanometer (blood pressure cuff).

The student will identify the parts of a stethoscope.

The student will identify the markings on a blood pressure cuff gauge.

The student will inflate a blood pressure cuff to approximately 140-150 and slowly let the air out until the needle indicates 0.

The student will place a blood pressure cuff on the arm of another student.

The student will take another student's blood pressure.

The student will record the other student's blood pressure.

The student will clean the earpieces of the stethoscope with a piece of cotton soaked in 70% alcohol.

VOCATIONAL CLUSTERS

Office Occupations

ACTIVITY IMPLEMENTATION

A. Activity Description

The student will learn about the parts of a stethoscope and a sphygmomanometer (blood pressure cuff) and the proper handling of these instruments. Once this has been accomplished, they will have a chance to take and record each other's blood pressure.

B. Safety

Handle the blood pressure cuff with care, as gauges can be broken.

No pins or needles that could put holes in rubber tubing or bladder near the blood pressure cuff.

Thumbscrew will break if tightened too tight or loosened too much; it should not be turned either way beyond what you can control with the thumb and index finger.

Wash hands before starting the procedure.

Clean the earpiece after each student's use.

C. Materials Required

1. Audio Visual Equipment
   Projection screen
   Filmstrip Projector
   Cassette player
2. Technical Equipment
   13 aneroid sphygmomanometers (blood pressure cuffs)
   13 stethoscopes
   1 double stethoscope
   1 filmstrip - *The Licensed Practical Nurse* and cassette
3. Expendable Materials
   13 small paper cups
   60 cotton balls
   1 pint 70% alcohol (473 ml)
   25 pencils

D. Preparation Prior To Class

Run off Masters for Duplication.

Obtain expendable materials.

Set up room so that students can work in groups of two.

At each station, place the following items:

- 4 cotton balls in a cup of 70% alcohol
- 1 stethoscope
- 1 aneroid sphygmomanometer (blood pressure cuff)
- 2 Student Learning Activity Guides

Set up equipment for for filmstrip.

E. During Class Session

Show the filmstrip.

INTRODUCTION – The taking of a person's blood pressure is a common task of a practical nurse.

Today, you will learn about a stethoscope and a blood pressure cuff. Once you have learned how to use these instruments, you will have a chance to take the blood pressure of one of your classmates.

Be sure you follow your programmed text carefully so that you will be able to take a blood pressure properly.

3. Make sure students are following the programmed text.
4. Be ready to check a blood pressure using the double stethoscope when called on.
5. Assist when needed.

F Follow-up Activities

1. Have students fill out VIEW Fact Sheet.
2. Field trip to a health institution.
3. Visit health room at school.
4. Set up blood pressure screening at school to take other students' blood pressure.
5. Look for advertisements in newspaper to see how many different places use LPNs.
6. Do reports on what blood pressure is, or hypertension and hypotension.
7. Visit first-aid station in industrial plant.

ANSWER KEY

Checkpoint – Objective I

- A. Cuff
- B. Aneroid gauge
- C. Bulb
- D. Thumbscrew
- E. Area of rubber bladder
- F. Tube to gauge
- G. Tube to bulb

Checkpoint – Objective II

- A. Earpieces
- B. Tubing
- C. Head of stethoscope

Checkpoint – Objective III

- A. 82
- B. 130
- C. 58
- D. 108
- E. 134
- F. 172

MASTERS FOR DUPLICATION

VIEW Fact Sheet
Checkpoint: Objective I
Checkpoint: Objective II
Checkpoint: Objective III
Handout: Objective VII

VIEW FACT SHEET

NAME _____ CLASS _____ OCCUPATION _____

A. List the advantages (good points) of this occupation (job).

B. List the disadvantages (bad points) of this occupation (job).

C. List three things you should know to do this occupation (job).
1.
2.
3.

D. What type of education should you get to be prepared (do) for this occupation (job)?

E. What courses must you take to go into this occupation (job)?

F. What do you think your future in this occupation (job) will be?

G. What wage can you expect in this occupation (job)?

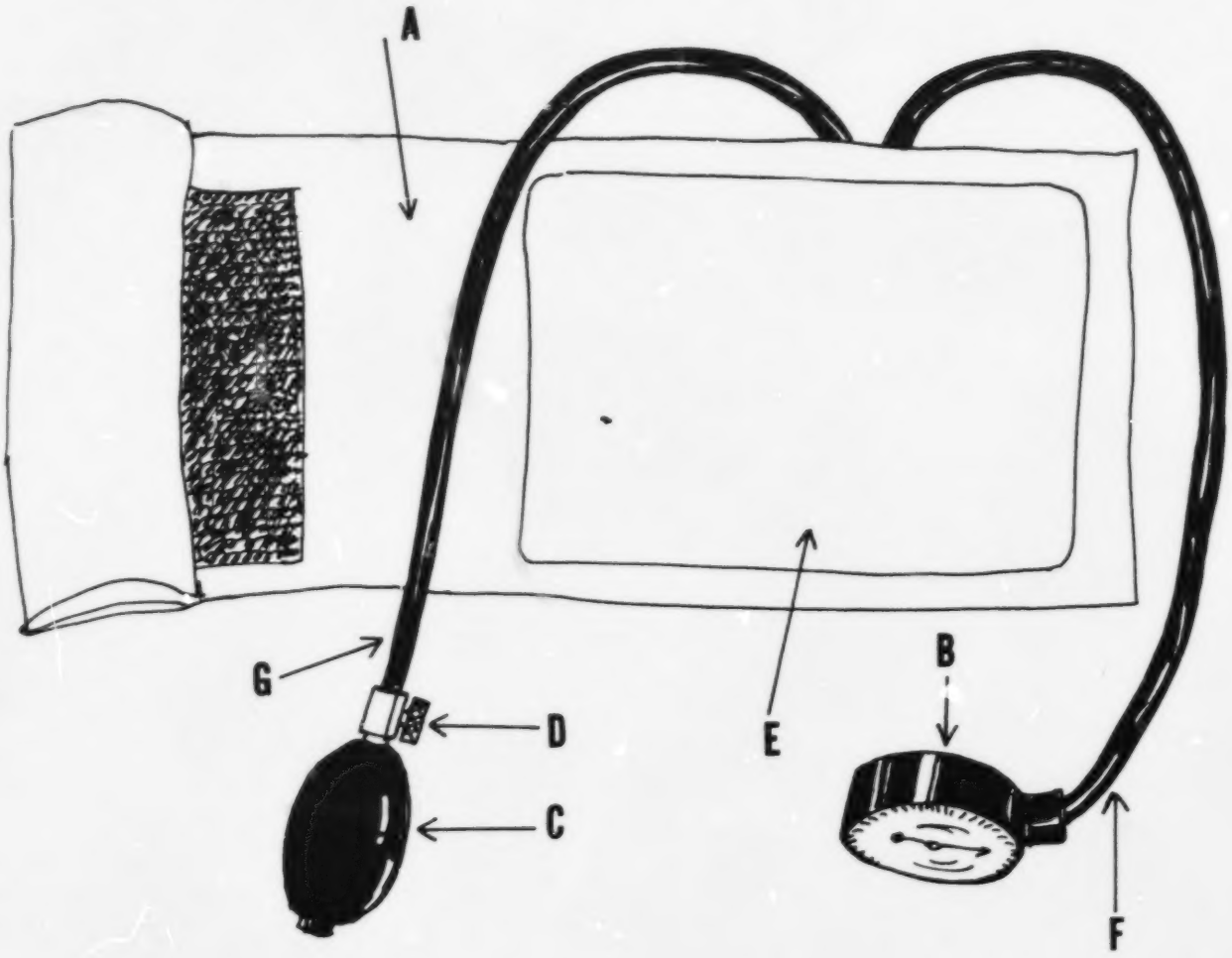
H. What are the working hours of this occupation (job)?

I. To learn more about this occupation (job), write to:

J. Using a scale of 1 to 5, circle the number that measures your interest in this occupation (job) as a possible career.

3

CHECKPOINT: INSTRUCTIONAL OBJECTIVE I



A _____

B _____

C _____

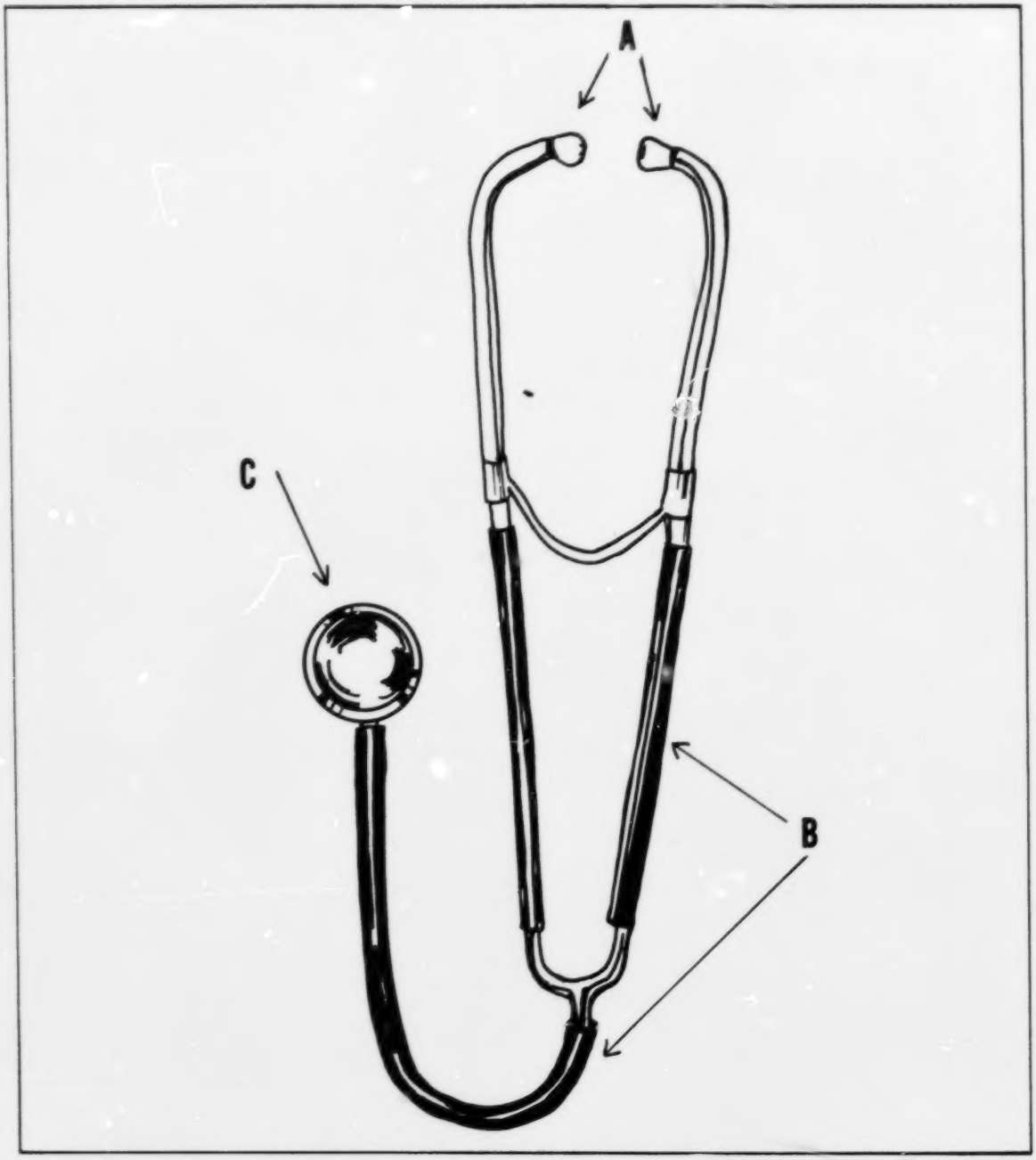
D _____

E _____

F _____

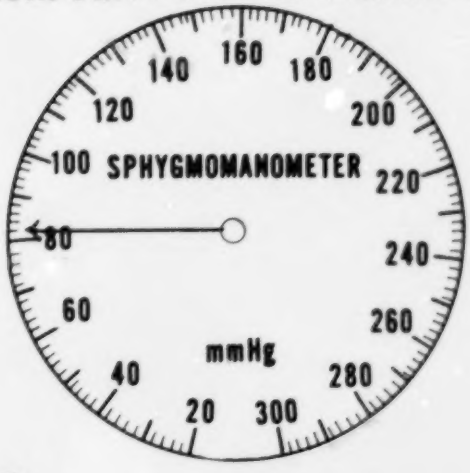
G _____

CHECKPOINT: INSTRUCTIONAL OBJECTIVE II



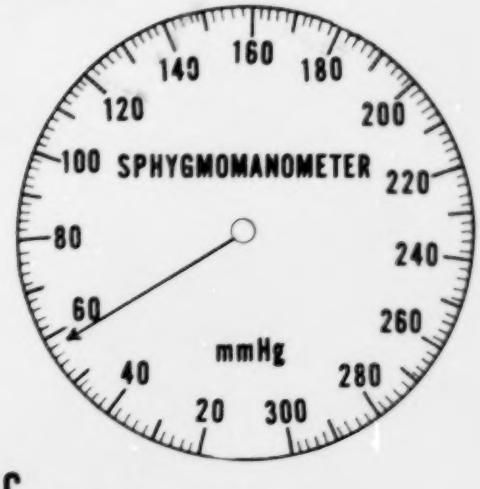
A _____ B _____ C _____

CHECKPOINT: INSTRUCTIONAL OBJECTIVE III



A _____

B _____



C _____

D _____

E _____

F _____

INSTRUCTIONAL OBJECTIVE VII

	NAME	BLOOD PRESSURE	DATE	CLASS

HEALTH OCCUPATIONS – PRACTICAL NURSE

Kit No. 45

STUDENT
LEARNING ACTIVITY GUIDE

Prepared by

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INTRODUCTION

What is blood pressure? Blood pressure is the force exerted by the heart to pump the blood throughout the body. The blood pressure will vary because of many reasons such as the size of the person, the amount of rest or sleep, the state of emotions, etc. Blood pressure can indicate an illness before other symptoms appear.

The normal range for an adult person is $\frac{90\text{-}140}{60\text{-}90}$. The upper number reading, called systole (sis-to-le), is when the heart forces the blood onward to circulate through the body. Diastole (di-as-to-le) is the lower number; that is when the heart is resting.

GOALS

The student will know the names of the different parts of a blood pressure cuff.

The student will know the names of the different parts of a stethoscope.

The student will learn how to use a blood pressure cuff.

The student will learn how to take and record another student's blood pressure.

The student will learn how to clean a stethoscope after use.

DIRECTIONS

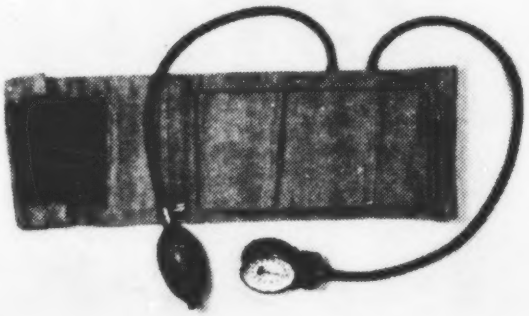
Start with Instructional Objective I. You and your partner should do Objectives I through IV at the same time. Objectives V through VIII are to be done by one person with the other person acting as the patient. If you are unable to do a Checkpoint, re-do the steps and the Checkpoint.

MATERIALS

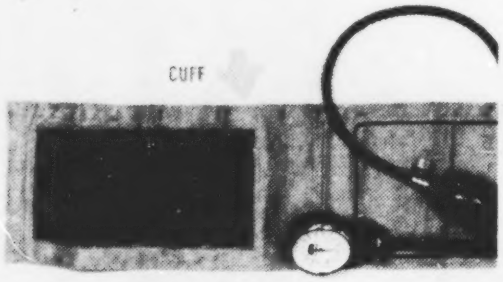
1 sphygmomanometer (blood pressure cuff)
1 stethoscope
1 cup containing cotton balls and 70% alcohol
2 Student Learning Activity Guides

Instructional Objective 1

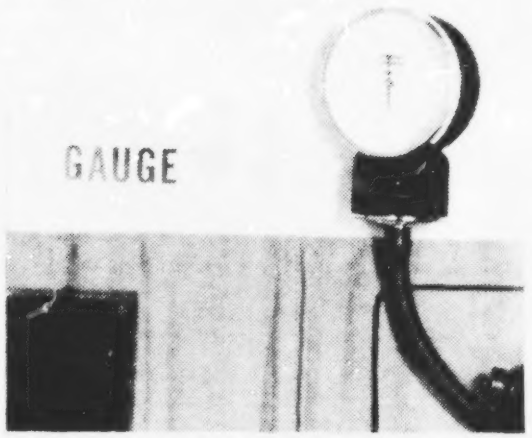
The student will identify the parts of a sphygmomanometer (blood pressure cuff).



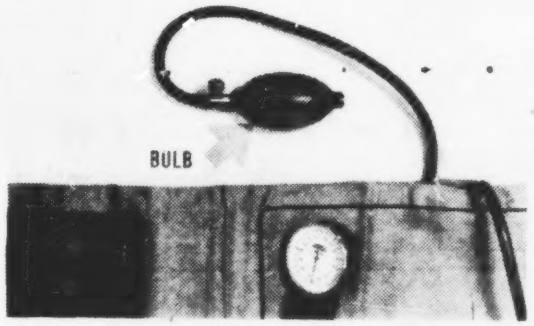
STEP 1 – Lay the blood pressure cuff in front of you as shown in the picture. Look at the parts as identified in the following steps.



STEP 2 – This part is called the cuff and is wrapped around a person's arm.

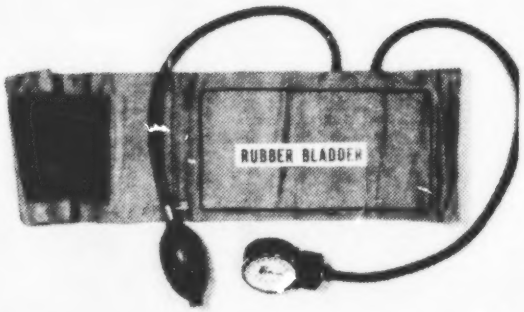


STEP 3 – This is the gauge that measures the person's blood pressure.

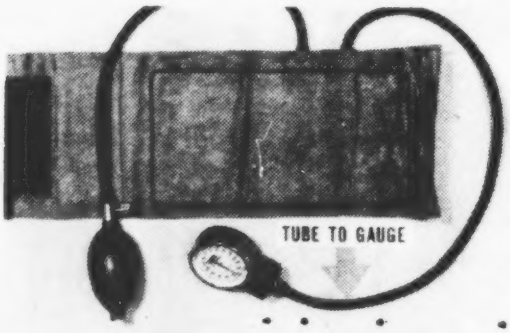


STEP 4 – This is the bulb that is used to pump air into the bladder.

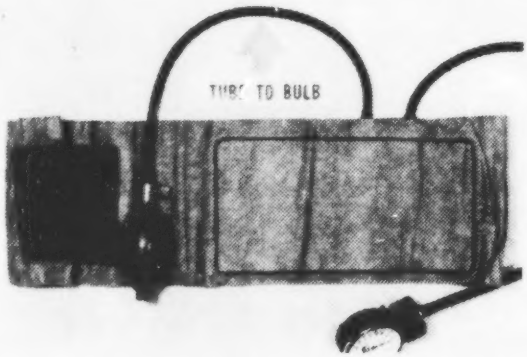
STEP 5 – This is the thumbscrew which allows the air to be released from the bladder.



STEP 6 – This is the area of the rubber bladder which is used to hold the air.



STEP 7 – This is the tube which goes to the gauge.



STEP 8 – This is the tube which goes to the bulb.

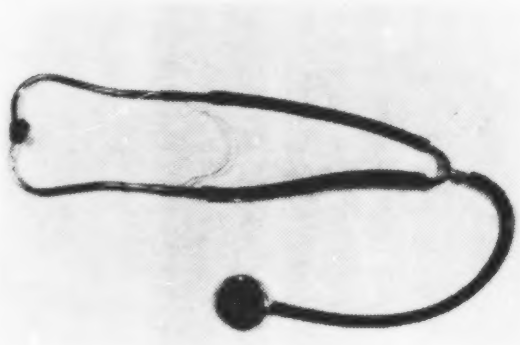
Check Point

Go to your instructor and get the handout for Instructional Objective I. Without looking in your guide, write the name of the part in the blank space next to the same letter as the one pointing to the picture. When you are done, go to your instructor and ask to see the Answer Key.

If all your answers are correct, go on to the next objective. If any are wrong, re-do the steps and the checkpoint.

Instructional Objective II

The student will identify the parts of a stethoscope.



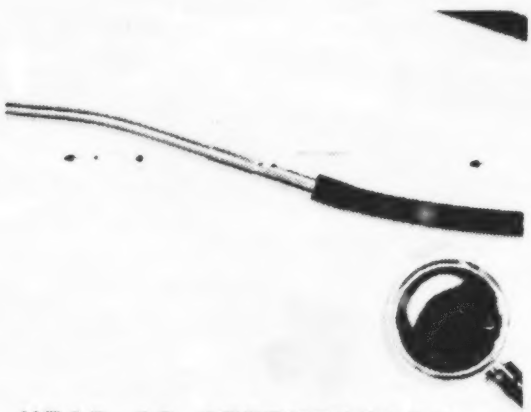
STEP 1 – Lay the stethoscope in front of you as shown in the picture. Look at the parts of it while doing the following steps.

EAR PIECES

STEP 2 – These are the earpieces and are placed in the ear to listen to the pulse.

TUBING

STEP 3 – This is the tubing through which the sound travels.



HEAD OF STETHOSCOPE

STEP 4 – This is the head of the stethoscope which is placed on the person's arm to pick up the sound of the pulse.

Check Point

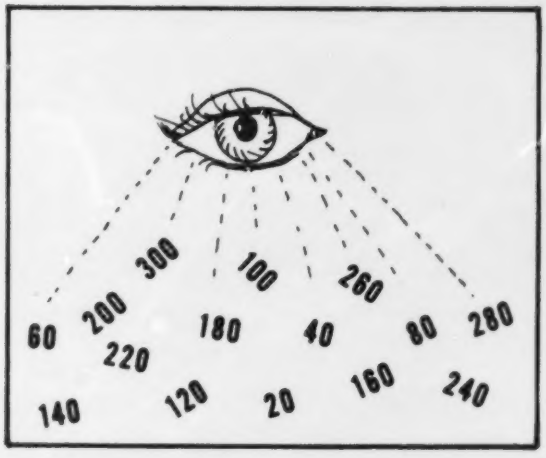
Go to your instructor and get the handout for Instructional Objective II. Without looking in your guide, write the name of the part in the blank space next to the same letter as the one pointing to the part in the picture. When you are done, go to your instructor and ask to see the Answer Key.

If all your answers are correct, go on to the next objective. If any are wrong, re-do the steps and the checkpoint.

Instructional Objective III

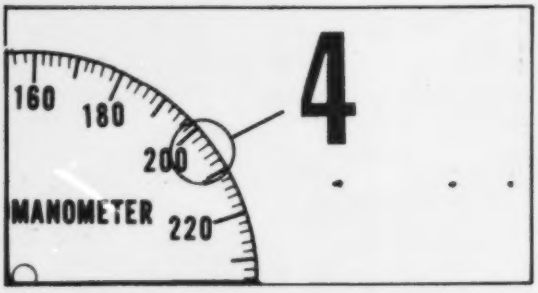
The student will identify the markings on a blood pressure cuff gauge.

STEP 1 – This is what the face of the gauge on the blood pressure cuff looks like.

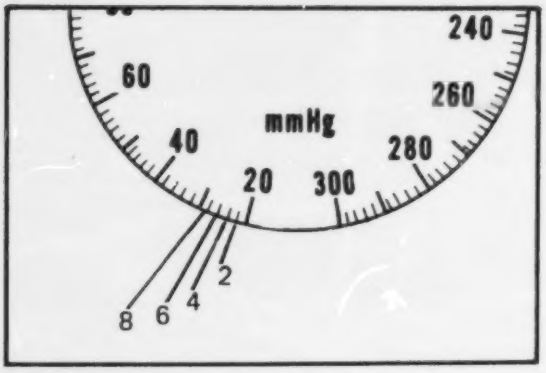


STEP 2 – Look at the numbers that are on the gauge. These are all even numbers.

STEP 3 – Look at the long lines between the numbers. These lines are the odd numbers. The one that your indicator is pointing to is 70.



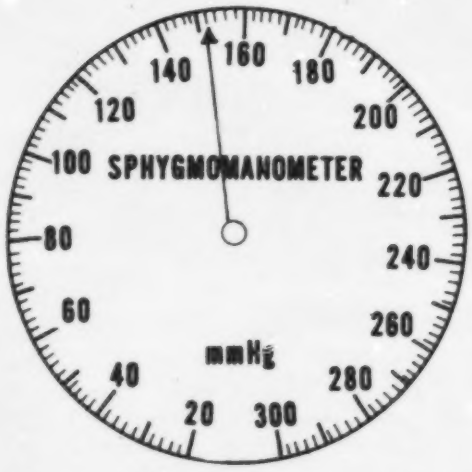
STEP 4 – Between all the long lines are short lines. There are always four of the short lines between the long lines. Count some of these.



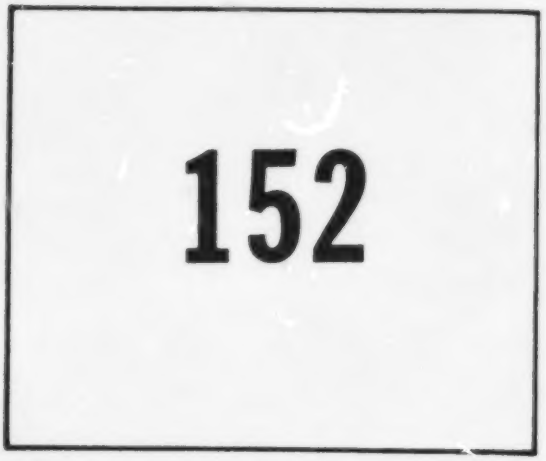
STEP 5 – Going clockwise, these short lines are numbered 2, 4, 6, and 8. When reading the gauge, you add the number of the short line to the number of the long line before it. Let's practice reading the gauge.

STEP 6 – What number is the indicator pointing to on this gauge?

STEP 7 – The answer is 86. The indicator is pointing to the third short line which is 6, and it is after 80, which makes it 86. Let's try another one.



STEP 8 – What number is the indicator pointing to on this gauge?



STEP 9 – The answer is 152. The indicator is pointing to the first short line which is 2, and it is after the unnumbered long line, 150, which makes it 152.

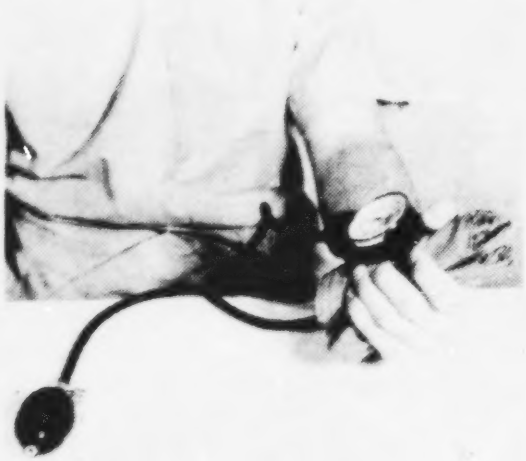
Check Point

Go to your instructor and get the handout for Instructional Objective III. Under each gauge, write the number in the blank space that the indicator is pointing to. When you are done, go to your instructor and ask to see the Answer Key.

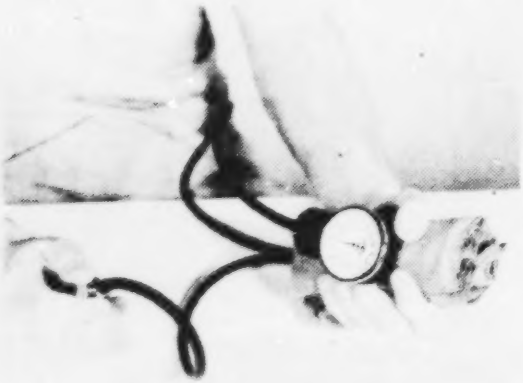
If all your answers are correct, go on to the next objective. If any are wrong, re-do the steps and the checkpoint.

Instructional Objective IV

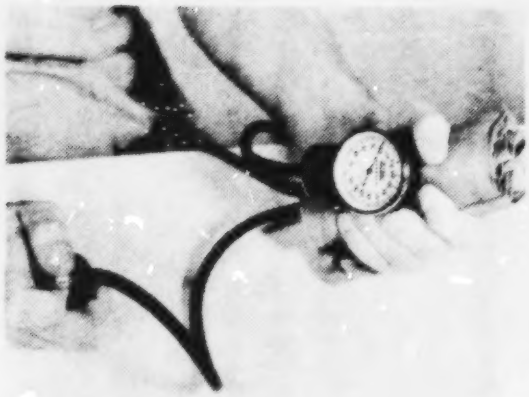
The student will inflate a blood pressure cuff to approximately 140-160 and slowly let the air out until the needle indicates 0.



STEP 1 – Roll the blood pressure cuff tightly and hold with one hand.



STEP 2 – With your other hand, hold the rubber bulb and use your thumb and index finger to tighten the thumbscrew just tight enough so air doesn't escape. Make sure you can loosen the thumbscrew with just your thumb and index finger.



STEP 3 – Tighten the thumbscrew by turning clockwise and squeezing the bulb several times until the needle reaches approximately 140-160, while holding the tightly rolled cuff in your other hand.

STEP 4 – With your hand holding the bulb, use your thumb and index fingers to loosen the thumbscrew slightly by turning counterclockwise; watch the needle fall slowly down to 0.

REPEAT
REPEAT
REPEAT

STEP 5 – Continue repeating the above four steps until you can control the valve so that the needle falls slowly and evenly to 0.

STEP 6 – If your partner hasn't practiced this procedure, let him or her do so before going on.

Check Point

Did you have the cuff rolled up tightly?

Did you hold the bulb as shown in the illustration?

Were you able to turn the thumbscrew?

Were you able to control the thumbscrew so that the air was released slowly?

Instructional Objective V

The student will place a blood pressure cuff on the arm of another student.

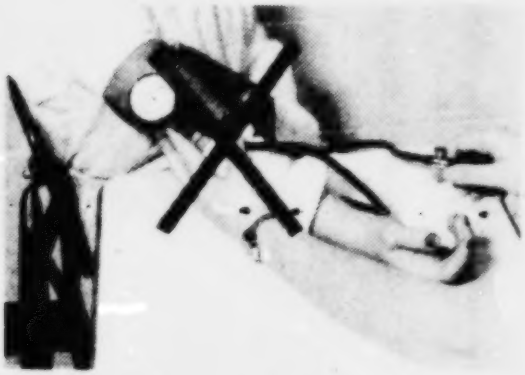
STEP 1.– Have your partner sit down and place the nearest arm on the desk top facing you.

STEP 2 – The palm of the hand of the student getting a blood pressure taken should be facing up.

STEP 3 – Place the blood pressure cuff on the arm about 1" (2.54 cm) to 1½" (3.81 cm) above the bend in the elbow with the gauge facing you.

STEP 5 – The tubes on the blood pressure cuff should be on the lower edge of the cuff near the elbow.

STEP 4 – Wrap the long end of the cuff snugly around the arm and press the velcro together.



STEP 6 – Never place the blood pressure cuff over clothing.

STEP 7 – Make sure the cuff is tight enough so that it doesn't slip.

STEP 8 – With your first two fingers, feel for the pulse (heartbeat) on the middle to inner side of the elbow, using a small amount of pressure. You should feel a slight thumping.

STEP 9 – Place the earpieces of the stethoscope in your ears.

STEP 10 – Carefully place the head of the stethoscope, smooth side down, over the area you felt the pulse (heartbeat).

STEP 11 – If you could not feel the pulse in step 8 after trying several times, place the head of the stethoscope over the elbow from the middle to inner side. CAUTION: The stethoscope magnifies sound, so do not let the head hit any surface, or it will hurt the ears.

Check Point

Did you place the blood pressure cuff correctly on your partner's arm?

Were you able to find your partner's pulse?

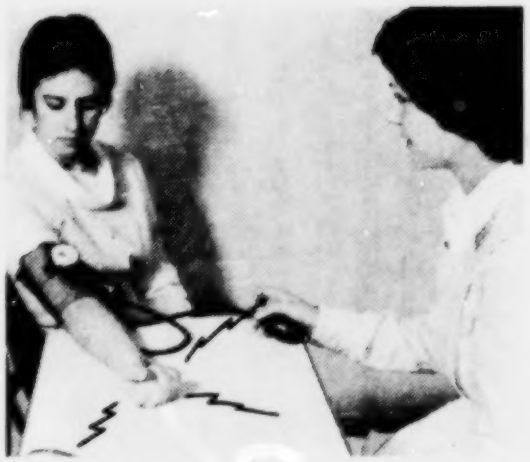
Were you able to hear your partner's pulse though the stethoscope?

Instructional Objective VI

The student will take another student's blood pressure.

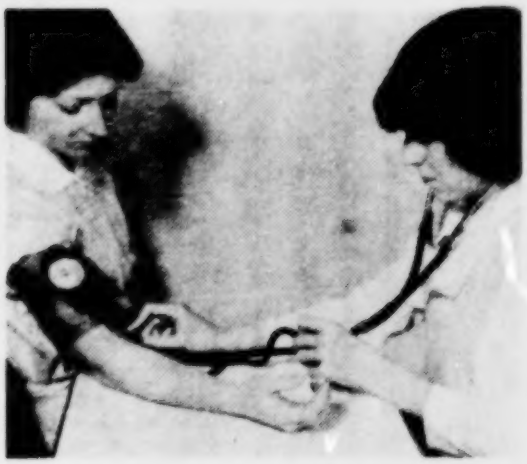
STEP 1 – Never take a person's blood pressure over three times on the same arm at one sitting; this could cause bruising.

STEP 2 – Do not stop the needle as it comes down (at any place).

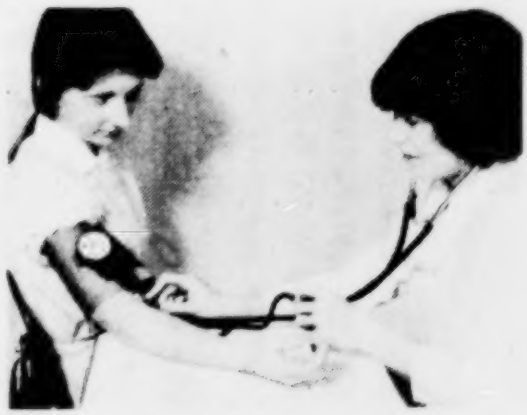


STEP 3 – Tell the person whose blood pressure you are taking that when the cuff is tight on the arm, it may cause a tingling in the hand. He/she should continue to hold still, however.

STEP 4 – Turn the thumbscrew clockwise to tighten and squeeze the bulb several times until the indicator reaches about 180 on the gauge.



STEP 5 – Now turn the thumbscrew slightly counterclockwise to loosen so that the indicator falls slowly and evenly. Listen with the stethoscope until you hear the first regular thumping noise; remember the number on the gauge.



STEP 6 – Keep listening to the thumping until you cannot hear it anymore; remember the number at which it stopped.

STEP 7 – Write down the first number; this is when you started hearing the sounds, example $\frac{120}{\quad}$. Then write down the number where you stopped hearing the sound, example $\frac{120}{80}$. This is the person's blood pressure. Blood pressure may vary on the same person each time you take it; also, blood pressure will vary when taken on the other arm of the same person.

STEP 8 – If you did not hear the thumping, or if you let the air out too fast, push any remaining air out of the cuff with your hands. While the cuff is still on the arm, repeat step 4. This may be done two (2) times; then the cuff must be removed to the other arm or another person.

STEP 9 – If you are having trouble hearing the thumping, you may be opening the thumbscrew too much and letting the needle drop too fast. You may also be expecting to hear a loud sound; the sound may be very faint.

STEP 10 – Remember, blood pressure varies for many reasons. The excitement of getting a blood pressure check can raise the reading and lack of sleep over a long period of time can lower the blood pressure. Anyone's blood pressure reading over $\frac{140}{90}$ should be rechecked by health personnel.

Check Point

Ask your instructor to check your reading. Both of you can listen for the thumping using the double stethoscope. If you both obtain a reading within 2 to 4 points of each other, you have successfully learned to take a person's blood pressure.

Instructional Objective VII

The student will record the other student's blood pressure.

STEP 1 – Get the handout for Instructional Objective VII from your instructor.

STEP 2 – Under name, write the name of the person whose blood pressure you have just taken.

24

STEP 3 – Under blood pressure, write the reading you took.

STEP 4 – Under date, write today's date.

STEP 5 – Under class, write the period your class meets.

Check Point

Check the information you have written in, especially the blood pressure reading, to make sure it is right.

Instructional Objective VIII

The student will clean the earpieces of the stethoscope with a piece of cotton soaked in 70% alcohol.

STEP 1 – If you haven't done so already, remove the stethoscope from your ears.

STEP 2 – Take a ball of cotton from the cup that contains 70% alcohol.

STEP 3 – With a small amount of friction and a rotating movement, clean the earpieces. When you are through, throw the cotton in the trash can.

STEP 4 – If your partner hasn't taken your blood pressure, it is now his or her turn.

Check Point

Did you make sure that the earpieces were clean?

079.374-014 NURSE, LICENSED PRACTICAL (medical ser.)

Cares for ill, injured, convalescent, and handicapped persons in hospitals, clinics, private homes, sanitariums, and similar institutions: Takes and records temperature, blood pressure, and pulse and respiration rate. Dresses wounds, gives enemas, douches, alcohol rubs, and massages. Applies compresses, ice bags, and hot water bottles. Observes patients and reports adverse reactions to medical personnel in charge. Administers specified medication, and notes time and amount on patients' charts. Assembles and uses such equipment as catheters, tracheotomy tubes, and oxygen suppliers. Performs routine laboratory work, such as urinalysis. Sterilizes equipment and supplies, using germicides, sterilizer, or autoclave. Prepares food trays and feeds patients. Records food and fluid intake and output. Bathes, dresses, and assists patients in walking and turning. Cleans rooms, makes beds, and answers patients' calls. Washes and dresses bodies of deceased persons. Must pass state board examination and be licensed. May assist in delivery, care, and feeding of infants.

354.374-010 NURSE, PRACTICAL (medical ser.)

Cares for patients and children in private homes, hospitals, sanatoriums, industrial plants, and similar institutions: Bathes and dresses bed patients, combs hair, and otherwise attends to their comfort and personal appearance. Cleans room, and changes bed linen. Takes and records temperature, pulse, and respiration rate. Gives medication as directed by PHYSICIAN (medical ser.) or NURSE, GENERAL DUTY (medical ser.), and makes notation of amount and time given. Gives enemas, douches, massages, and alcohol rubs. Applies hot and cold compresses and hot water bottles. Sterilizes equipment and supplies, using germicides, sterilizer, or autoclave. Prepares food trays, feeds patients, and records food and liquid intake and output. Cooks, washes, cleans, and does other housekeeping duties in private home. May give injections. May care for infants and small children in private home. For practical nurses meeting State licensing requirements see NURSE, LICENSED PRACTICAL (medical ser.).